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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/905,131

07/13/2001

Yoshiharu Doi

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7590

01/16/2004

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EXAMINER

PEREZ, ANGELICA

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 01/16/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/905,131

Applicant(s)

DOI, YOSHIHARU

Examiner

Angelica M. Perez

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda (Ikeda et al.; Pub. No.: US 2001/0055948 A1) in view of Ogino (Ogino, Tooru; Pub. No.: US 2001/0029173 A1).

Regarding claims 1, 5 and 9, Ikeda teaches of a mobile communication terminal and method (paragraph 0002, lines 1-4) for performing reception and transmission (paragraph 0011, lines 1-9) using an adaptive array method (paragraph, 0011, 1-9), (b) reception means for forming a directivity pattern (paragraph 0007, 3-8) for receiving a desired reception signal and receiving the reception signal using the formed directivity pattern (paragraph 0011, 1-9), and (c) transmission means for transmitting a transmission signal using the directivity pattern formed in reception (paragraph 0008). In addition, Ikeda teaches of a program to perform the method described (paragraph 0038).

Ikeda does not explicitly teach where the mobile communication terminal is provided with (a) a plurality of antennas and where it comprises: detection mean for detecting a reception error in the reception signal so that a pattern

different from the directivity pattern formed in reception is formed and the transmission signal is transmitted in the formed pattern.

In related art related to a portable telephone apparatus that deals with can directivity of antennas, Ogino teaches where the mobile communication terminal is provided with (a) a plurality of antennas (0012, lines 1-4). Also, he teaches of detection means for detecting a reception error in the reception signal (0058, lines 1-2 and figure 7, item 610) ; and transmission control means for controlling the transmission means when the detection means detects the reception error (paragraph 0058 and claim 9; where the pattern is changed when the directivity of the antenna is changed).

Regarding claims 2, 6 and 10, Ikeda in view of Ogino teaches all the limitations according to claim 1. Ogino further teaches where when the detection means detects the reception error, the transmission control means controls the transmission means so that the non-directional pattern is formed using one of the plurality of antennas (refer to claims 9 and 11; where the change of directivity assumes a new pattern), and the transmission signal is transmitted in the non-directional pattern (refer to claims 9 and 11; where the BER provides information regarding signal error).

Regarding claims 3, 7 and 11, Ikeda in view of Ogino teaches all the limitations according to claim 2. Ogino further teaches where when the detection means detects the reception error, the transmission control means controls the transmission means so that the non-directional pattern is formed using one of the plurality of antennas that has the largest antenna gain, and the transmission

signal is transmitted in the non-directional pattern (paragraphs 0065 and 0066; where the "largest antenna gain" is inherent in the "selection of the optimal reception state").

Regarding claims 4, 8 and 12, Ikeda in view of Ogino teaches all the limitations according to claim 2. Ogino further teaches where the communication terminal further includes selection means for measuring a quality of the reception signal for each of the plurality of antennas and selecting an antenna with the highest reception quality, wherein when the detection means detects the reception error, the transmission control means controls the transmission means so that the non-directional pattern is formed using the antenna selected by the selection means, and the transmission signal is transmitted in the non-directional pattern (paragraph 0066 and 0073; where the "the highest reception quality" corresponds to the "selection of the optimal reception state". Also, since the selection operation takes place, it implies that the terminal includes the measuring means).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patent No.: 6,463,303 B1; deals with beam forming and selection to provide desired signals to/from processing devises.

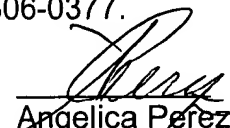
US Patent No.: 6,317,611; refers to a communication device with adaptive antenna.

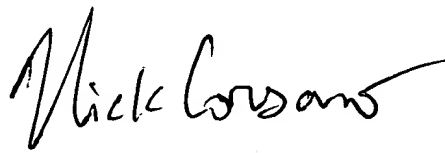
Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Angelica Perez whose telephone number is 703-305-8724. The examiner can normally be reached on 7:15 a.m. - 3:55 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.


Angelica Perez
(Examiner)
December 30, 2003


Art Unit 2684